



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,633	08/25/2003	Yuji Otake	36069	2523

116 7590 02/25/2004

PEARNE & GORDON LLP
1801 EAST 9TH STREET
SUITE 1200
CLEVELAND, OH 44114-3108

EXAMINER

EVANISKO, LESLIE J

ART UNIT	PAPER NUMBER
----------	--------------

2854

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/647,633

Applicant(s)

OTAKE ET AL.

Examiner

Leslie J. Evanisko

Art Unit

2854

AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-7 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 08/25/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities: It appears the term "(S)" on page 11, line 20 should be --S(I)-- since that is how the initial stroke was previously defined in line 11 of page 11.

Appropriate correction and/or clarification is required.

Claim Objections

3. Claims 1-7 are objected to because of the following informalities:

With respect to claim 1, the term "the mask plate" in line 2 has no proper antecedent basis since no mask plate was previously recited in the claim. To correct this problem, it is suggested that the term "the" in line 2 be deleted and replaced with --a-- or similar language. Note a similar problem with the term "the mask plate" occurs in line 2 of claim 5.

Additionally, with respect to claim 5, line 9, the term "said work plate" has no proper antecedent basis since no work plate was previously recited. To correct this problem, it is suggested that the term "plate" in line 9 be deleted.

Appropriate correction and/or clarification is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4, and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Tomomatsu (US 5,623,872). Tomomatsu teaches a screen printing method comprising a mask attachment step in which the work **4** is brought into contact with the mask plate **2**, a squeegeeing step in which a squeegee **12** is moved on the mask plate **2** in the mask attachment state thereby to fill paste into the pattern holes **2a** of the mask plate **2**, and a plate separating step in which the work **4** is separated from the mask plate stepwise by a plate separating operation of repeating plural times an acceleration and deceleration pattern in which a moving speed V at which the work is moved in a direction where the work separates from the mask plate is accelerated up to an upper limit speed and thereafter is decelerated up to a lower limit speed, wherein an initial upper limit speed (V_{peak} of pattern P4 in Fig. 5) representing the upper limit speed at the start of the plate separating operation is set higher than succeeding upper limit speeds (V_{peak} of patterns P5-P8 in Fig. 5) representing the upper limit speeds from the middle of the plate separating

operation on. Particular attention is invited to Figures 2-6 and column 5, lines 1-column 6, line 11 of Tomomatsu.

With respect to claims 4 and 7, note the work **4** is separated from the mask plate **2** by causing the work to descend. See column 4, lines 37-44 and column 5, lines 19-23 in particular.

With respect to claims 5 and 6, note Tomomatsu teaches a screen printing method comprising a mask attachment step, a squeegeeing step, and a plate separating step in which a plate separating operation of moving the work in the direction where the work separates from the mask plate is performed, wherein *in the start of the plate separating operation*, the moving speed V is broadly accelerated up to an upper limit speed (i.e., V_{peak} of pattern P4) and thereafter is broadly decelerated up to a lower limit speed (i.e., the bottom of pattern P4, $V=0$). Again, see Figure 5 of Tomomatsu in particular. Note that in considering only the start of the plate separating operation as specifically recited in claims 5 and 6, the start of the plate separating operation in Tomomatsu is taken to be comprised by the pattern P4 shown in Figure 5 and therefore, does not include repeated acceleration and deceleration since both the acceleration and deceleration are performed continuously.

Allowable Subject Matter

6. Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 2, the prior art of record fails to teach or fairly suggest a screen printing method including all of the method steps as recited, in combination with and particularly including, the plurality of acceleration and deceleration patterns are set so that the succeeding upper limit speeds are decelerated gradually.

With respect to claim 3, the prior art of record fails to teach or fairly suggest a screen printing method including all of the method steps as recited, in combination with and particularly including, in the start of the plate separating operation, a plurality of acceleration and deceleration patterns are set so that acceleration and deceleration is repeated at the nearly equal initial upper limit speed, and this upper limit speed is set higher than succeeding upper limit speeds representing the upper limit speeds from the middle of the plate separating operation on. Note this claim is reciting the particular speed relationship illustrated in Figure 6 of the instant application, which is not taught or rendered obvious by the prior art of record.


Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Taniguchi et al. (US 5,735,203), Saeki et al. (JP 04-236490), and Andris et al. (US 5,174,201 and US 4,902,371) each teach a screen printing method comprising a plate separating step having obvious similarities to the claimed subject matter.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Leslie J. Evanisko** whose telephone number is **(703) 308-0786**. The examiner can normally be reached on M-Th 7:30 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (703) 305-6619. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Leslie J. Evanisko
Primary Examiner
Art Unit 2854

lje
February 8, 2004